Scenes, Innovation, and Urban Development

Handbook of Creative Cities

Appendix

**Appendix A**

**Creative Cities Dependent Variables (CCDVs)**

There are nine variables central to our quantitative analysis of innovation and urban development under the context of Scenes. They represent our outcomes and are used as indicators of what we and others believe to be relevant characteristics of creative cities. Some, like change in population and change in jobs, are more generic measures of urban growth. Others, like patents per capita, are very specific outcomes associated with innovation.

*Patents*

Our patents variables were constructed from the publicly available data provided by the United States Patent Office. They represent the locations of individuals taking out patents from 1975-1999, aggregated to the county level and broken into three categories: entertainment patents, high technology patents and other patents. These data were originally collected and organized by Robert Cushing and used previously in Clark (2003). Our slight tweak was to convert total patents into patents per capita, based on the total county population in 1990. This necessitates an explicit definition of its interpretation.

The proportion of patents granted from 1975 to 1999 in a given county versus its population in 1990 represents its *innovative capital* up to the year 1999. Normalizing in this manner produces a measure of historic levels of innovation relative to the population size of a county. Population in 1990 was chosen for the pragmatic reason that it represents a point in time roughly in the middle of the period of interest. A more precise measure may be imagined.

*Classic Urban Growth Measures*

We employ four different measures of urban growth to capture different aspects of these changes. All data come from the United States Census.

Change in population This is the most basic measure of urban growth. While the causal mechanisms underlying a change in population are multiple, including the Core in multivariate regression serves to broadly control for at least some of these phenomena. For instance, including median gross rent captures some of the effect of cost-of-living on growth. Change is defined as the proportional change in population from 1990 to 2000. A natural logarithm transform was applied to better satisfy linear regression assumptions.

Change in total employment This measure indicates change in the local economy via size of the civilian labor force. [[1]](#footnote-1) Prior to 1994 employment data was not available at the zip code level, thus we have opted to use 1994 as our baseline rather than our usual 1990. Change is defined as the proportional change in employees from 1994 to 2001. A natural logarithm transform was applied to better satisfy linear regression assumptions.

Change in per capita income This measure indicates the extent to which residents have attained, on average, higher incomes. Change is measured as the proportional change in per capita income from 1990 to 2000.

Change in median gross rent This measure roughly indicates the change in cost of living, a proxy for the desirability of a given area. While often related to change in per capita income, there are many factors affecting cost of living which are not tied to residents’ wealth, such as commercial development. Change is defined as the proportional change in median gross rent from 1990 to 2000.

*Human Capital Growth Measures*

We utilize educational attainment as a rough measure of human capital in zip codes (ZCTAs) across the country. Specifically, we examine the change in the proportion of college graduates as well as the change in proportion of post-graduates (those holding a graduate or professional degree) from 1990 to 2000. Change is measured as the difference between the proportion of the population in 2000 and the proportion of the population in 1990 for each category. By definition, college graduates also include those individuals who reported attaining a higher degree.

**Core Independent Variables (the Core)**

Eight variables are included as independent variables in all analyses, unless otherwise noted. They largely represent measures classically associated with urban growth and/or innovation.

*Temporally Prior*

Given that five of our nine CCDVs are change variables comparing 2000 to 1990, we thought it prudent to control for certain initial conditions in our models. It was decided that there were five variables whose values at the beginning of this time period were likely to impact all nine of our outcomes. The first four are directly from the Census, while the last is drawn from the County and City Data Book (CCDB) made available by the Census.

Population size This is a standard measure which has multiple implications for the rate at which many variables change. As is often done, a natural logarithm transform was applied in order to better satisfy linear regression assumptions.

Education level In many circumstances, the average level of education in an area is expected to have particular effects on future development, especially economically. Thus we include a measure which is the proportion of the population in 1990 which were 25 years of age or older and had earned at least a Bachelor’s degree.

Non-white population A more traditional measure related to urban growth in general is the presence of minorities. Past work has often shown that race is likely to have a significant association with particular patterns of growth. Thus we include a measure which is the proportion of the population which is not Caucasian.

Median gross rent Insofar as cost of living is related to the kind of people who are able to live in a particular area, median gross rent will be influential in the kinds of changes an area experiences.

Democratic Vote Share in 1992 The final initial condition we consider is the level of support for Bill Clinton in the 1992 Presidential election. This is measured at the county level and corresponds to a particular political climate which may impact the kind of policies local governments enact regarding growth.

*Temporally Simultaneous*

Just as there are initial conditions we believe will affect our CCDVs, there are also concurrent conditions which we also believe to be associated with our outcomes. We consider three such variables, keeping in mind that questions of causality are entirely out of the question.

Crime Rate Crime can discourage people from moving to or visiting an area and depress business activity; it is a classic negative amenity or public bad. Statistics for 1999 were drawn from the County and City Data Book, include both violent and non-violent crime, and are normalized such that values represent the number of crimes per 100,000 population.

Arts Job Location Quotient Much interest has arisen around the economic role of jobs based on creative expression, specifically their possible effects on seemingly unrelated industries. To this end, we constructed a location quotient to measure the extent to which zip codes contain higher or lower concentrations of artistic jobs. It is calculated as the ratio of the proportion of total jobs which are artistic in a zip code to the proportion of total jobs which are artistic nationwide. Thus a value above one indicates that a zip code has proportionally more artistic jobs than the national average. Data on employment were taken from the 1998 County Business Patterns and a natural logarithm transform was applied to the ratio to better satisfy the assumptions of linear regression. The jobs we considered to be “artistic” are listed in the table below according to NAICS code.

|  |  |  |  |
| --- | --- | --- | --- |
| **Table 1. Components of Artistic Jobs Measures** | | | |
| NAICS | Description[[2]](#footnote-2) | NAICS | Description |
| 451140 | Musical instrument & supplies stores | 541430 | Graphic design services |
| 451211 | Book stores | 541830 | Media buying agencies |
| 451212 | News dealers & newsstands | 541840 | Media representatives |
| 451220 | Prerecorded tape, CD & record stores | 541921 | Photography studios, portrait |
| 453920 | Art dealers | 541922 | Commercial photography |
| 512110 | Motion picture & video production | 611610 | Fine schools |
| 512131 | Motion picture theaters (except drive-ins) | 711110 | Theater companies & dinner theaters |
| 512191 | Teleproduction & other postproduction services | 711120 | Dance companies |
| 512199 | Other motion picture & video industries | 711130 | Musical groups & artists |
| 512210 | Record production | 711190 | Other performing arts companies |
| 512230 | Music publishers | 711510 | Independent artists, writers & performers |
| 512240 | Sound recording studios | 712110 | Museums |
| 512290 | Other sound recording industries | 712120 | Historical sites |
| 513111 | Radio networks | 712130 | Zoos & botanical gardens |
| 513112 | Radio stations | 712190 | Nature parks & other similar institutions |
| 513120 | Television broadcasting | 713110 | Amusement & theme parks |
| 513210 | Cable networks | 713120 | Amusement arcades |
| 532230 | Video tape & disc rental |  |  |

Yellow Pages Factor Score (Urbanity) Just as the County Business Patterns (CBP) data were used to construct Performance Scores (see below for details), we also utilized commercial software to collect nationwide business data via online yellow pages (YP) directories. These data include more specific types of amenities (i.e. “Chinese restaurants” which would be counted as “family restaurants” in the CBP) which were coded in the same manner as amenities from the CBP data. YP Performance Scores and CBP Performance Scores for the same zip code often vary to a certain degree. Given that the integrity of the CBP data is likely higher than the YP data, if only in its official nature, we chose to incorporate the YP Performance Scores as a Scenes “control” variable. That is, we include it in the Core as a way to control for what might be considered background Scenic experiences which may otherwise express themselves through our CBP measures. We accomplish this by extracting the first factor of a principal components analysis on the 15 sub-dimensional performance scores derived from the YP data. This factor has a substantive and coherent interpretation, Urbanity, which is described within the text.

**Other Independent Variables**

There are many variables we use to test various propositions. They too can be divided into those which are temporally prior or simultaneous. This necessitates a slight shift in interpretation in any given model, depending on which category the independent variable of interest falls under. For those which are prior, we tentatively discuss its effect on the outcome. For those which are simultaneous, we only consider its association with the outcome. These shifts in interpretation are elaborated within the text.

*Temporally Prior*

Commute Time is taken directly from the 1990 Census and reports the mean travel time to work for individuals 16 years and older who are employed. Source: 1990 Census.

Public Transportation Use represents the percentage of individuals 16 years and older who are employed and use public transportation to travel to work. Source: 1990 Census.

Working from Home is the total number of individuals 16 years and older who are working at home. Source: 1990 Census. Natural logarithm used.

Walkability is the ratio of the number of individuals 16 years and older who walk to work to the total population. Source: 1990 Census. The intent is to capture the extent to which individuals are “out and about” on a daily basis. Natural logarithm used.

Physical Climate These variables consist of mean January temperature and mean July temperature. Both are reported at the county level by the United States Department of Agriculture (USDA) and represent the average values from 1941 to 1970.

Natural Amenities Scale The USDA also provides a natural amenities scale constructed from six measures of climate, topology and water area which reflect the natural environment most individuals prefer. More information on its construction and face validity can be found in this USDA report: <http://www.ers.usda.gov/Publications/AER781/>.

*Temporally Simultaneous*

Population Density is calculated using the population and land area in 2000. Two versions are computed, one involving zip codes (ZCTAs) and the other involving counties.

Social Climate we measure using the DDB Needham Lifestyle survey, which includes responses from over 80,000 individuals from 1975 to 1998, and was featured prominently by Putnam in *Bowling Alone*. See Clark 2003 for more on this survey. The construction of the measures used here can be found in Appendix C.

Performance Scores See Appendix B on Building Measures of Scenes

Bohemian Index. Our coding of Bohemia draws on past and recent discussions of the nature of Bohemia to determine how a Bohemian scene combines the 15 sub-dimensions of scenes, as shown in Table 1.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 1: Ideal-Typical Bohemian Scene**[[3]](#footnote-3) | | | | | | | |
| Sub-Dimension | Score |  | Sub-Dimension | Score |  | Sub-Dimension | Score |
| Traditionalistic | 2 |  | Neighborly | 2 |  | Local | 4 |
| Self-Expressive | 5 |  | Formal | 3 |  | Ethnic | 4 |
| Utilitarian | 1 |  | Glamorous | 3 |  | State | 2 |
| Charismatic | 4 |  | Exhibitionistic | 4 |  | Corporate | 1 |
| Egalitarian | 2 |  | Transgressive | 5 |  | Rational | 2 |

Defined thusly, a scene is more Bohemian if it exhibits resistance to traditional legitimacy, affirms individual self-expression, eschews utilitarianism, values charisma, promotes a form of elitism (Baudelaire’s “aristocracy of dandies”), encourages members to keep their distance, promotes transforming oneself into an exhibition, values fighting the mainstream, affirms attending to the local (Balzac’s intense interest in Parisian neighborhoods), promotes ethnicity as a source of authenticity (cf. Lloyd 2006: 76), attacks the distant, abstract state, discourages corporate culture, and attacks the authenticity of reason (Rimbaud’s “systematic derangement of all the senses”). Scenes whose amenities generate profiles that are closer to this ideal-type receive a higher score on our Bohemian Index (measured as the value distance from the “bliss point” defined by Table 1). This measurement from a bliss point is analogous to policy distance analyses in voting (e.g. Riker & Ordeshook 1973: ch. 11). Operationally, we subtract the distance of each zip code on each of the 15 dimensions from the Bohemian “bliss point” defined in Table 6. We then aggregate these 15 distances and take the reciprocal score.

Yes, there is room for debate on this and any characterization of Bohemia. In practice, the index identifies many neighborhoods which others cite as distinctly Bohemian: in Chicago, the highest scoring neighborhoods in 2000 include Bucktown, Wicker Park, Humboldt Park, and Logan Square, all commonly perceived as Bohemian at the time (Lloyd 2006), even if they may have changed in the meantime.

Arts Jobs In addition to the measure included in the Core, we also constructed an arts jobs location quotient using a more restricted set of NAICS categories representing more purely creative occupations. Just as the relative concentration of artistic jobs is considered relevant to these analyses, the total number of artistic jobs may be at least as important. Thus a second variable was also constructed: The natural logarithm of the total number of artistic jobs in a given zip code. Below is a list of jobs included in these measures:

|  |  |
| --- | --- |
| **Table 2. Components of Narrowly Constructed Arts Jobs Measures** | |
| NAICS Code | Description |
| 453920 | Art dealers |
| 512131 | Motion picture theaters (except drive-ins) |
| 611610 | Fine arts schools |
| 711110 | Theater companies & dinner theaters |
| 711120 | Dance companies |
| 711130 | Musical groups & artists |
| 711190 | Other performing arts companies |
| 711510 | Independent artists, writers & performers |
| 712110 | Museums |

Research and Development Jobs Similar to artistic jobs, of research and development jobs are considered another kind of creative sector. Location quotients and total number of jobs were calculated as for artistic jobs. The jobs we considered “research and development” are listed in the table below.

|  |  |
| --- | --- |
| **Table 3. Components of Research and Development Measures** | |
| NAICS Code | Description |
| 541710 | Research and Development in the Physical, Engineering, and Life Sciences |
| 541720 | Research and Development in the Social Sciences and Humanities |
| 611310 | Colleges, Universities, and Professional Schools |
| 927110 | Space Research and Technology |
| 541380 | Testing Laboratories (specifically engineering and architecture) |
| 541620 | Environmental Consulting Services |
| 541690 | Other Scientific and Technical Consulting Services |

Technology Jobs Similar to research and development jobs, technologically inclined jobs are another kind of creative sector which deserves special attention. It is distinct from research and development in that employees are not necessarily creating new knowledge. Location quotient and total number of jobs were calculated as for artistic jobs.

|  |  |  |  |
| --- | --- | --- | --- |
| **Table 4. Components of Technology Jobs Measures** | | | |
| NAICS | Description | NAICS | Description |
| 511210 | Software Publishers | 514210 | Data Processing Services |
| 513210 | Cable Networks | 518112 | Web Search Portals |
| 513220 | Cable & other program distribution | 541420 | Industrial Design Services |
| 513310 | Wireless Telecommunications Carriers | 541490 | Other Specialized Design Services |
| 513321 | Paging (wireless) | 541511 | Custom Computer Programming Services |
| 513322 | Cellular & other wireless telecommunications | 541512 | Computer Systems Design Services |
| 513340 | Satellite Telecommunications | 541513 | Computer Facilities Management Services |
| 513390 | Other Telecommunications | 541519 | Other Computer Related Services |
| 514191 | On-line information services | 611420 | Computer Training |

Waterfront Amenities Waterfronts are a common intersection of natural and built amenities. While the USDA provides measures of the former, we had to construct a measure for the latter. This was done using our Yellow Pages data. Our waterfront variable consists of the total number of amenities providing beach accessories, boat and yacht charters, rental and leasing, boating services, marina services, raft trips and tours, river trips, waterfront food service and whale watching in a given area. Natural logarithm used.

**Table 5. Descriptive Statistics for Creative Cities Dependent Variables (CCDVs)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Variable | Description | Source | Level Of Analysis | Year(s) | Mean | Std Dev |
| *LGEntN* | *LN Entertainment Patents per Capita* | U.S. Patent Office | County | 1975-1999 | 0.70 | 2.25 |
| *LGOtherN* | *LN Other Patents per Capita* | U.S. Patent Office | County | 1975-1999 | 2.21 | 1.11 |
| *LGHiTechN* | *LN High Technology Patents per Capita* | U.S. Patent Office | County | 1975-1999 | 0.23 | 2.88 |
| *LzipTemploy\_ratio0194R* | *LN Proportional Change in Jobs* |  | Zip Code | 1994/2001 | -0.06 | 0.74 |
| *LnChPop290* | *LN Proportional Change in Population* | Census | Zip Code | 1990/2000 | 0.05 | 0.66 |
| *ChPCI290* | *Prop. Change in Per Capita Income* | Census | Zip Code | 1990/2000 | 1.59 | 0.40 |
| *ChGrRt2090* | *Prop. Change in Median Gross Rent* | Census | Zip Code | 1990/2000 | 1.35 | 0.45 |
| *dflevel\_collegegrads* | *Difference in Proportion of College Graduates* | Census | Zip Code | 1990/2000 | 0.02 | 0.03 |
| *dflevel\_gradprofdeg* | *Difference in Proportion of Pop. With Grad/Professional Degrees* | Census | Zip Code | 1990/2000 | -0.01 | 0.02 |

**Table 6. Descriptive Statistics for Core Independent Variables (the Core)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Variable | Description | Source | Level of Analysis | Year(s) | Mean | Std Dev |
| ITEM005 | *Population* | Census | Zip Code | 1990 | 427706 | 1121590 |
| CollProfLv90 | *Proportion Bachelors Or Higher* | Census | Zip Code | 1990 | 0.15 | 0.12 |
| LevelNonWhite\_90 | *Proportion Non-White* | Census | Zip Code | 1990 | 0.12 | 0.19 |
| ITEM218 | *Democratic Vote Share (Clinton)* | Census | Zip Code | 1992 | 41.46 | 11.28 |
| ITEM108 | *Median Gross Rent* | Census | Zip Code | 1990 | 389.79 | 127.96 |
| CrimeRate1999county | *Crime Rate (per 100,000)* | CCDB | County | 1999 | 3707.72 | 2163.74 |
| ARTGOSLG98a | *Arts Jobs Location Quotient (Broad)* | CBP | Zip Code | 1998 | -3.50 | 1.85 |
| YP\_FactorScore | *First Factor of Yellow Pages Perf. Scores* | Yellow Pages | Zip Code | 2001 | 0 | 1 |

**Table 7. Descriptive Statistics for Other Independent Variables**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Variable | Description | Source | Level of Analysis | Year(s) | Mean | Std Dev |
| crtpctwalk90 | *Percent Walk to Work* | Census | Zip Code | 1990 | 1.47 | 0.60 |
| L\_trvtim | *Mean Travel Time to Work* | Census | Zip Code | 1990 | 22.10 | 6.71 |
| L\_pubtra | *% Using Public Transportation* | Census | Zip Code | 1990 | 1.95 | 5.83 |
| popdens\_zip | *Population Density* | Census | Zip Code | 2000 | 1136.21 | 4357.23 |
| countdens\_1990 | *Population Density* | Census | Zip Code | 1990 | 877.43 | 4448.70 |
| WorkHome | *Population Working At Home* | Census | Zip Code | 1990 | 104.37 | 218.588 |
| LV\_WalkWork2 | *Walkability Measure* | Census | Zip Code | 1990 | 0.32 | 0.14 |
| SpxMTtrad22nn\_mean\_impu | *DDB Traditionalism Perf. Score* | DDB Needham | County | 1975-1998 | 0.85 | 0.68 |
| SpxMTtrans22nn\_mean\_impu | *DDB Transgressive Perf. Score* | DDB Needham | County | 1975-1998 | -1.24 | 0.68 |
| SpxMTutil22nn\_mean\_impu | *DDB Utilitarianism Perf. Score* | DDB Needham | County | 1975-1998 | -0.27 | 0.22 |
| SpxMTlocal22nn\_mean\_impu | *DDB Localism Perf. Score* | DDB Needham | County | 1975-1998 | 1.17 | 0.61 |
| SpxMTneigh22nn\_mean\_impu | *DDB Neighborliness Perf. Score* | DDB Needham | County | 1975-1998 | 0.89 | 0.46 |
| meanjultemp | *Mean July Temperature* | USDA | County | 1941-1970 | -3.50 | 1.85 |
| meanjantemp | *Mean June Temperature* | USDA | County | 1941-1970 | 75.26 | 5.47 |
| waterfront\_amen | *Waterfront Amenities* | Yellow Pages | Zip Code | 2001 | 0.42 | 2.33 |
| natamenityscale | *USDA Natural Amenities Scale* | USDA | County | - | 0.59 | 2.85 |
| styxblis\_flip | *Bohemian Scene Measure* | CBP | Zip Code | 2001 | 0.06 | 0.002 |
| ARTGOLG98a | *Arts Jobs (Narrow) Location Quotient* | CBP | Zip Code | 1998 | -3.69 | 1.63 |
| RDJOBSLQ98a | *R&D Jobs Location Quotient* | CBP | Zip Code | 1998 | 0.15 | 1.13 |
| technarrowLG98a | *Technology Jobs Location Quotient* | CBP | Zip Code | 1998 | -3.76 | 1.61 |
| artgoszipemp98a | *Arts Jobs* | CBP | Zip Code | 1998 | 44.39 | 230.62 |
| rdjobszipemp98a | *R&D Jobs* | CBP | Zip Code | 1998 | 41.08 | 258.31 |
| technarrowzipemp98 | *Technology Jobs* | CBP | Zip Code | 1998 | 174.51 | 605.13 |

**Appendix B**

### Building Measures of Scenes

Significant intellectual and technical efforts were required to construct a satisfactory measure of Scenes. As the plausibility of our results rests directly on the credibility of our quantitative constructs, we now briefly describe the process through which the Scenes Performance Scores were created. This began with a deliberate choice to analyze phenomena nationwide rather than in particular cities, states or counties. The rationale was to avoid the arbitrariness of an urban/rural distinction from the very beginning.

Extending a literature stretching back over twenty years, we began by considering particular amenities (i.e. parks, art galleries, supermarkets, restaurants, etc.) and how we may recover Scenes from this atomistic hodge-podge of public spaces. This appeared to be a natural avenue since amenities data are readily available through the County Business Patterns (CBP) data made available by the Census Bureau and Scenes are a holistic experience constituted by the set of particular experiences within a location. Thus we reasoned that each kind of amenity contributes in a particular way to the constitution of a Scene. Taken together, the configuration of amenities produces an experience greater than the individual services/products associated with each individually.

In order to aggregate the effect of individual amenities, each amenity was given a profile that indicates how it contributes to the Scene of a location. These profiles are then used to determine how amenities “add” together to create different experiences. To create scene profiles we asked a small number of individuals to use a specific definition of each scene sub-dimension to score amenities on a scale of 1 to 5. A score below three indicates that the amenity has a negative relation to that particular kind of experience, one being the most negative relation possible – anti-traditionalism or anti-corporate authenticity. Conversely, a score above three indicates that the amenity has a positive relation to that particular kind of experience, five being the most positive relation possible. A score of three indicates that the amenity is neutral with respect to that sub-dimension. At least three different individuals scored all 143 amenities we were interested in, with the average score on each sub-dimension representing the scene profile of an amenity.[[4]](#footnote-4)

For example:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NAICS | d11i | d12i | d13i | d14i | d15i | d21i | d22i | d23i | d24i | d25i | d26i | d31i | d32i | d33i | d34i |
| 453920 | 3 | 4 | 2.25 | 4 | 3 | 3 | 3.33 | 3 | 3.75 | 3 | 2.33 | 3 | 3 | 2.75 | 3 |

Here, 453920 is the Census’ NAICS industry code for art dealers. The variables d11i, d12i … d34i represent different scenes sub-dimensions. For example, coders judged that the existence of an art dealer bolsters the self-expressiveness of an area (d12i = 4) while reducing its utilitarian experience (d13i = 2.25). Thus we were able to produce a table of NAICS codes and scene sub-dimension scores that we could match up to the CBP data. It is worth noting that to consider an additional amenity, one need only to add its NAICS code and scene profile to this table.

Performance Scores represent a standardized measure of a location’s scene profile. In other words, it is a kind of average experience presented to an individual. We obtain its value through a three-step process. First, we determine the total number of each coded amenity within the geographic area of interest – typically between one and a few dozen. Second, we multiply this number by the amenity’s sub-dimensional scores (its scene profile) to produce an Intensity Score for each sub-dimension.[[5]](#footnote-5) Next, we sum these Intensity Scores across the amenities within this location – this ranges from a single type of amenity up to, for example, the 143 kinds of amenities for which we have coded scene profiles. Finally, the Performance Score along a particular sub-dimension is this summed value divided by the total number of amenities within the area of interest for which we have coded a scene profile. Essentially we sum sub-dimensional scores across the same kind of amenity, then across all kinds of amenities, and divide the result by the total number of coded amenities. In an effort to demystify this process, consider the following simplified example:

Consider that a hypothetical town in New York, call it Normal. Normal, NY has two historic sites, three gas stations and the area’s local chapter of Amnesty International. Now, we have no scene profile for gas stations and so we must discount them entirely, keeping in mind that we can revisit this decision if we believe it to impact the research question at hand. Next, let us attempt to determine the Traditionalism Performance Score for Normal, NY. From our table of scene profiles, we know that historic sites score 4.5 on Traditionalism while human rights organizations score 2.75 on Traditionalism. Noting that with the exclusion of gas stations we have three total amenities, the Performance Score is computed as such:

Historic Sites’ Traditionalism Intensity Score



Traditionalism

Performance Score

Total number of Amenities which have scene profiles.

Number of Historic Sites.

Number of Human Rights Organizations

Human Rights Organization’s Traditionalism Score

Human Rights Organizations’ Traditionalism Intensity Score

Historic Site’s Traditionalism Score

**Appendix C**

**Table 1. DDB Variables Used in Analysis (59 Variables with > 50% Response Rate)**

|  |  |
| --- | --- |
| VARIABLE | QUESTION ASKED |
| ABORTION | I am in favor of legalized abortions |
| ABROADIM | The government should restrict imported products |
| ADVICE | My friends and neighbors often come to me for advice about products and brands |
| ANYFUN | I enjoy parties, games, shows--anything for fun |
| BEERBAR | Went to a bar or tavern (freq last 12 months) |
| BIGCOMPS | Most big companies are just out for themselves |
| BOSS | The father should be the boss in the house |
| BOWLING | Went bowling (freq last 12 months) |
| BUYAMER | Americans should always try to buy American products |
| CAMPING | Went camping (freq last 12 months) |
| CARDS | Played cards (freq last 12 months) |
| CHANGING | Everything is changing too fast today |
| CHURCH | Attended church or other place of worship (freq last 12 months) |
| CLASSIC | Went to a classical concert (freq last 12 months) |
| COMMPROJ | Worked on a community project (freq last 12 months) |
| DINPARTY | Gave or attended a dinner party (freq last 12 months) |
| DRESS | Dressing well is an important part of my life |
| DRINK | A drink or two at the end of the day is a perfect way to unwind |
| ENTHOME | Entertained people in my home (freq last 12 months) |
| FAMBREAK | We usually have a large family breakfast on weekends |
| FAMDIN | Our whole family usually eats dinner together |
| FISHING | Went fishing (freq last 12 months) |
| GOLF | Played golf (freq last 12 months) |
| GOODDAYS | I often wish for the good old days |
| GOVTV | The government should exercise more control over what is shown on TV |
| GREETING | Sent a greeting card (freq last 12 months) |
| HOME | I would rather spend a quiet evening at home than go out to a party |
| INFLUENT | I am influential in my neighborhood |
| LATEWORK | Stayed late at work (freq last 12 months) |
| LIVEMARR | Couples should live together before getting married |
| LOOKDIFF | I want to look a little different from others |
| MENSMART | Men are smarter than women |
| MOVIES | Went to the movies (freq last 12 months) |
| OLDFASH | I have somewhat old fashioned tastes and habits |
| PICNIC | Went on a picnic (freq last 12 months) |
| PLANS | I very seldom make detailed plans |
| POLICE | Police should use whatever force is necessary to maintain law and order |
| POLLUT | I support pollution standards even if it means shutting down some factories |
| POPROCK | Went to a pop or rock concert (freq last 12 months) |
| PRESLIFE | I wish I could leave my present life and do something entirely different |

**Table 1. DDB Variables Used in Analysis (81 Variables with >50% Response Rate)**

|  |  |
| --- | --- |
| VARIABLE | QUESTION ASKED |
| RELAX | I wish I knew how to relax |
| ROUTINE | My days seem to follow a definite routine |
| ROUTDIST | Changes in routine disturb me |
| SAMETOWN | I would be content to live in the same town the rest of my life |
| SAVEMON | I am not very good at saving money |
| SELFPROJ | Worked on a do-it-yourself project around the house (freq last 12 months) |
| SKIING | Went skiing (freq last 12 months) |
| SMOKING | Smoking should not be allowed in public places |
| SOFTBALL | Played softball (freq last 12 months) |
| SPORTING | Attended a sporting event (freq last 12 months) |
| TENNIS | Played tennis (freq last 12 months) |
| TRYONCE | I am the kind of person who would try anything once |
| UNIONS | Unions have too much power in America today |
| VISART | Visited an art gallery or museum (freq last 12 months) |
| VISDIFF | I like to visit places that are totally different from my home |
| WILLMOVE | We will probably move at least once in the next five years |
| WOMENLIB | I think the women's liberation movement is a good thing |
| WOMPLACE | A Woman's place is in the home |
| WORKHARD | I work very hard most of the time |

**Table 2. Formulae for Indices: Social Climate**

|  |  |
| --- | --- |
| INDEX | FORMULA |
| Traditional | mean.12(church06\*1, classic06\*1, boss06\*2, buyamer06\*1, fambreak06\*1, famdin06\*1, womplace06\*1, lookdiff06\*(-1), womenlib06\*(-1), routine06\*1, changing06\*1, oldfash06\*1, sametown06\*2, routdist06\*1, gooddays06\*2, preslife06\*(-1), visdiff06\*(-1), livemarr06\*(-2), abortion06\*(-1), golf06\*1, greeting06\*1, home06\*1, mensmart06\*1) |
| Utilitarian | mean.17(beerbar06\*(-1), bowling06\*(-2), camping06\*(-1), cards06\*(-1), classic06\*(-1), dinparty06\*(-1), enthome06\*(-1), golf06\*(-1), movies06\*(-1), poprock06\*(-2), softball06\*(-1), skiing06\*(-1), sporting06\*(-1), tennis06\*(-1), visart06\*(-2), pollut06\*(-1), drink06\*(-1), latework06\*2, plans06\*(-1), relax06\*1, savemon06\*(-1), selfproj06\*1, workhard06\*1, abortion06\*1, abroadim06\*(-1), advice06\*1, anyfun06\*(-1), buyamer06\*(-1), church06\*(-1), mensmart06\*(-1), picnic06\*(-1), smoking06\*(-1), unions06\*1, womenlib06\*1) |
| Transgressive | mean.12(poprock06\*1, lookdiff06\*2, classic06\*(-2), dress06\*(-2), church06\*(-2), golf06\*(-1), boss06\*(-1), buyamer06\*(-1), livemarr06\*1, oldfash06\*(-2), routine06\*(-2), tryonce06\*1, bowling06\*(-1), changing06\*(-1), fambreak06\*(-1), govtv06\*(-2), home06\*(-1), police06\*(-2), routdist06\*(-1), sametown06\*(-1), smoking06\*(-2), visdiff06\*1, workhard06\*(-1)) |
| Local | mean.7(camping06\*1, church06\*1, fishing06\*1, influent06\*2, commproj06\*1, sametown06\*2, willmove06\*(-1), abroadim06\*1, bigcomps06\*1, buyamer06\*1, fambreak06\*1, picnic06\*1, skiing06\*1, softball06\*1) |

Note: The values of the 81 variables in Appendix A. have been recoded so that they range from 0 to 6. After the recoding, the 81 variables have been renamed “---06.” For example, the original variable GOLF has been renamed GOLF06 and only then incorporated into the analyses.

All DDB items were scored by a team of coders on the 15 dimensions according to a 5-point scale (-2, -1, 0, 1, 2) where two values (1 and 2) indicate affirmation of the dimension, two values negation (-1 and -2) and 0 neutrality (we have omitted the 0’s from the above formulas). It is important to bear in mind that we were not surveying coders’ attitudes, but asking and training them to apply specific definitions of the 15 dimensions to each DDB item according to a dichotomous decision tree (this process is outlined elsewhere, Silver? 2006). Their task was to determine the degree to which a positive response to a given question involves, say, an appeal to or attack on tradition for its legitimacy (in addition to the 14 other dimensions). High levels of inter-subjective confirmation were achieved (r’s above .8), and reliability was verified through comparable results from new staff.

The indexes combine these scores to produce cultural profiles for all respondents based on the *degree* to which their responses indicate a *composite* affirmation, negation, or neutrality toward each of the 15 dimensions. No single response makes a person glamorous or not; the whole package of responses (that, in total, favor indicate valuing and participating in flashy, exciting, star-studded events) is what matters – confirmed by the fact that removing individual items from our indexes do not significantly alter our results. Moreover, these indexes indicate the extent to which individuals evince a range of analytical dimensions of cultural consumption – they are not ideal-types. Various ideal-types can be derived by combining all or some of the dimension. This is a project for future research

1. The County Business Patterns (CBP) data cover all NAICS categories excluding farm jobs, most government jobs, and quasi-governmental jobs such as the United States Postal Service. See <http://www.census.gov/econ/cbp/index.html> for more information. [↑](#footnote-ref-1)
2. Full descriptions for all NAICS items can be found at http://www.census.gov/naics [↑](#footnote-ref-2)
3. 1 is negative, 3 is neutral and 5 is positive [↑](#footnote-ref-3)
4. While we determined the scene profile for each amenity using a relatively small sample of individuals, we do have plans to scale this process up in order to increase our confidence in these values. As it was, reported values varied little among our respondents, with Pearson r’s of over 0.8. Descriptive analyses reported in Silver, Clark, and Navarro (2010) demonstrated significant face validity. [↑](#footnote-ref-4)
5. The Intensity Score is the unweighted effect the presence of a particular kind of amenity has on a location. While we do not here make analytic use of Intensity Scores, we consider them more than just an intermediate step on the way to computing performance scores. In particular, they allow for the possibility of discerning which amenities are the major drivers of particular sub-dimensions (i.e. we can tell the difference between an overwhelming number of slightly traditional amenities versus a small number of extremely traditional amenities). [↑](#footnote-ref-5)